

Procedure for converting poultry manure from as produced to CFSR available for application in IRWA

(LAR in Tons)		As Produced	Dry Bulk	Reduction from Composting	Avg for Utter, Dry Matter	Converted to Utter, Dry Matter	Adjusted to Net	Left Transported	Net for Application
Layers 20 weeks old and older inventory, number		119,141	119,291	5,307	0	119,291	44,911		
Hogs and other swine type/cattle LAR, number		493,554	171,829	32,44	16,118	171,107	120,454		
Calves total number		15,397	8,949	34	4,373	11,017	10,753		

Total

419,773 209,541 210,611 139,114 * 70,000 135,114

(%) Manure

Layers

Beef cattle

Turkeys

(%) Manure

75.00%

30.33% 0 50.00%

75.00% 31.17% 32.50% 74.00%

75.00% 0.37% 47.71% 34.00%

* Poultry litter at terminal is estimated to be in the range of \$31,000 to \$40,000/tons. This range is based on other experts analysis.

Summary of animal classes in IRWA study area showing their numbers and their contribution to wet manure, its components, and fecal coliform. Values have then been adjusted for natural composting based on stockpiling of manure through piles (dairy), lagoons (swine), and in-house composting (poultry) indicating the adjustment factors. Shown as actual numbers and percentages for the watershed. Poultry values expressed as litter.

	Actual Numbers				Percentages					
	Manure, tons	Nitrogen, lbs	Phosphorous, lbs	K, lbs	Adjusted	Manure, tons	Nitrogen, lbs	Phosphorous, lbs	K, lbs	Adjusted
Beef cows and other cattle and calves	1,870,647	21,910,067	1,935,101	13,347,512	838,651,573	77,41%	15,17%	41,11%	31,71%	87.99%
Hogs and pigs inventory	181,153	1,041,446	1,112,760	2,520,689	14,353,778	7,01%	5,31%	10,76%	9,55%	3.82%
Calves total number	15,397	1,771,157	117,291	1,040,603	21,372,782	0.71%	3.33%	1.34%	1.97%	2.16%
Horizon and pens of all ages inventory	83,495	931,963	233,181	821,470	138,815	1.75%	1.11%	1.47%	1.19%	0.01%
Winterized Deer population	21,421	446,875	74,514	331,337	515,535	0.83%	0.53%	0.37%	0.37%	0.00%
Sheep and lambs inventory	1,405	25,583	8,728	22,519	1,400,884	0.25%	0.04%	0.04%	0.07%	0.15%
Wild Turkey population	459	12,093	4,488	4,488	12,098	0.01%	0.01%	0.01%	0.01%	0.00%
Geese and Duck population	43	896	319	216	670,930	0.00%	0.00%	0.00%	0.00%	0.07%
Poultry (litter as removed)	219,514	12,608,358	8,288,442	7,917,516	55,531,149	11.42%	32.01%	41.38%	12.27%	1.64%
Total	2,183,483	33,321,953	18,431,120	24,184,867	951,130,795					

Poultry litter manure value taken from Appendix C

Summary of animal classes in IRWA study area showing their numbers and their contribution to wet manure, its components, and fecal coliform. Values have then been adjusted for natural composting based on stockpiling of manure through piles (dairy), lagoons (swine), and in-house composting (poultry) indicating the adjustment factors. Shown as actual numbers and percentages for the watershed. Poultry values expressed as litter and net of litter reported exported.

	Actual Numbers				Percentages					
	Manure, tons	Nitrogen, lbs	Phosphorous, lbs	K, lbs	Adjusted	Manure, tons	Nitrogen, lbs	Phosphorous, lbs	K, lbs	Adjusted
Beef cows and other cattle and calves	1,870,647	21,910,067	1,935,101	13,347,512	838,651,573	74.43%	60.38%	45.87%	55.31%	89.22%
Hogs and pigs inventory	181,153	1,041,446	1,112,760	2,520,689	14,353,778	7.31%	5.67%	12.07%	10.29%	0.00%
Calves total number	15,397	1,771,157	117,291	1,040,603	21,372,782	0.71%	3.41%	1.34%	1.79%	1.10%
Horizon and pens of all ages inventory	83,495	931,963	233,181	821,470	138,815	1.75%	1.21%	1.11%	1.18%	0.01%
Winterized Deer population	21,421	446,875	74,514	331,337	515,535	0.83%	1.32%	0.53%	1.12%	0.00%
Sheep and lambs inventory	1,405	12,093	4,488	4,488	12,098	0.01%	0.01%	0.01%	0.01%	0.00%
Wild Turkey population	459	12,093	4,488	4,488	12,098	0.02%	0.01%	0.01%	0.01%	0.00%
Geese and Duck population	43	896	319	216	670,930	0.00%	0.00%	0.00%	0.00%	0.07%
Poultry (litter as removed)	219,514	9,816,174	8,795,338	8,647,457	42,418,000	8.95%	26.41%	37.04%	13.85%	4.12%
Total of all except Poultry	1,974,572	26,793,395	8,544,562	18,141,031	977,495,168	91.04%	73.18%	62.54%	75.11%	81.44%
Total	2,151,484	36,176,748	12,316,976	14,124,484	939,931,166	100.00%	100.00%	100.00%	100.00%	100.00%

Poultry litter manure value taken from Appendix C

Poultry litter exported is 70,000 tons

Summary of animal classes in IRWA study area showing their numbers and their contribution to dry manure. Values have then been adjusted for natural composting based on stockpiling of manure through piles (dairy), lagoons (swine), and in-house composting (poultry) indicating the adjustment factors. Shown as actual numbers and percentages for the watershed. Poultry values expressed as litter and net of litter reported exported.

	Actual Numbers				Percentages					
	Manure, tons	Nitrogen, lbs	Phosphorous, lbs	K, lbs	Adjusted	Manure, tons	Nitrogen, lbs	Phosphorous, lbs	K, lbs	Adjusted
Beef cows and other cattle and calves	1,870,647	21,910,067	1,935,101	13,347,512	838,651,573	74.43%	60.38%	45.87%	55.31%	89.22%
Hogs and pigs inventory	181,153	1,041,446	1,112,760	2,520,689	14,353,778	7.31%	5.67%	12.07%	10.29%	0.00%
Calves total number	15,397	1,771,157	117,291	1,040,603	21,372,782	0.71%	3.41%	1.34%	1.79%	1.10%
Horizon and pens of all ages inventory	83,495	931,963	233,181	821,470	138,815	1.75%	1.21%	1.11%	1.18%	0.01%
Winterized Deer population	21,421	446,875	74,514	331,337	515,535	0.83%	0.08%	0.05%	0.09%	0.15%
Sheep and lambs inventory	1,405	12,093	4,488	4,488	12,098	0.02%	0.01%	0.01%	0.01%	0.00%
Wild Turkey population	459	12,093	4,488	4,488	12,098	0.00%	0.00%	0.00%	0.00%	0.07%
Geese and Duck population	43	896	319	216	670,930	0.00%	0.00%	0.00%	0.00%	0.07%
Poultry (litter as removed)	219,514	16,153,741	15,125,338	14,977,457	42,418,000	8.95%	26.41%	37.04%	13.85%	4.12%
Total	433,017	100.00%								

Poultry litter manure value taken from Appendix C

Poultry litter exported is 53,200 tons, dry weight

Poultry litter is 210,613 (litter dry weight) less 53,200 (imported dry weight)

PLAINTIFFS
ATTORNEYS
FOR THE PLAINTIFFS
IN THIS CASE

